

REMARKS

Reconsideration of the application is respectfully requested.

I. Status of the Claims

Claims 1-7 are pending. Claim 1 is presently amended and new claims 8-11 are added. No new matter is added. Support for the amendments may be found, for example, with reference to Applicants' specification at page 1, paragraph 11; Figure 4; and Table 1.

II. Claim Interpretation

Newly amended Claim 1 now recites "a metal magnetic powder including particles comprising crystals having an average size...of at least 30 nm, and crystal grain having an average size of at least 10 microns." In view of the Examiner's previous statements, Claim 1 was amended in order to clarify that the powder that is claimed, and not the starting materials to make the powder, contains crystals and crystal grains with the above properties.

II. Rejections under 35 U.S.C. § 102

Claims 1 to 7 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,800,636 to Tsukada et.al. ("Tsukada").

In amended independent claim 1, Applicants claim a soft magnetic material comprising a metal magnetic powder that has a final composition of crystals with an average size of at least 30 nm and the crystal grains having an average size of at least 10 microns.

With reference to Applicants' previous claims, the Examiner states that Tsukada teaches a soft magnetic iron powder with a particle size of 75 to 200 microns, which falls within the range of the Applicants' claims. The Examiner also states that Tsukada discloses that a powder is used to make cores and that the powder can be coated with a binder and an insulator.

Applicants respectfully traverse this rejection.

Applicants' claimed invention requires that the crystals within the resulting soft magnetic powder to have an average size of at least 30 nm and the crystal grains are to have an average size of at least 10 microns. (See page 3, 4, paragraphs 42, 44-48 and Table 1) In sharp contrast, Tsukada does not describe or suggest crystal size or crystal grain size of the final soft iron powder product. All it claims is that the particles be of a certain size. However, even if Tsukada's particles are crystalline, those particles cannot have the same crystalline properties as the Applicants' particles, as discussed below.

Tsukada also does not disclose or encourage an average crystal size as small as 10 microns. Tsukada discourages particles smaller than the preferred range of 75 to 200 microns because these smaller particles would lead to greater coercivity. (Tsukada, col. 6, lines 26-32.) In each embodiment and example that was not designated outside the scope of the invention, the powder particle size in Tsukada was between 106 and 180 microns. (See Table 1 and 3). In contrast, the small crystal size of the Applicants' invention creates a higher permeability. (page 1, paragraph 12). As stated in the specification, "*with a higher permeability, magnetic coercive force is reduced.*" (page 2, paragraph 0015). "Anticipation can only be found if a reference shows exactly what is claimed." *Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985). The Tsukada invention does not

disclose or anticipate a particle size as small as Applicants' claimed particle size of 10 microns, nor does it disclose reduced coercive effects obtained with smaller crystal size, as is disclosed in the Applicants' invention. Therefore the Applicants' invention is not anticipated.

Furthermore, Applicants' claimed particle size and the particle properties that result from that size, as discussed above, cannot be obtained from the process disclosed in Tsukada. Tsukada describes in column 8, lines 16-25 that the heat temperature process that is used to create the iron powder in the patent, when done at a temperature lower than 1200°C, is sufficient to remove strains and stresses within the powder, but is insufficient for crystal grains to grow. Tsukada states that altering the process used to create the soft iron powder to conform to the Applicants' process temperatures, which range between 100°C to no more than 1000°C, would mean that crystal grains would not grow. Tsukada's particles cannot have the same structure as Applicants' crystals, by nature of their own process. Therefore, Tsukada's crystals, which use the higher temperature ranger, could not be as small as the crystal sizes claimed by Applicants. Accordingly, Tsukada cannot create crystals from its process that are comparable to the Applicants' crystals.

For at least these reasons, Applicants respectfully submit that claim 1 is not anticipated by Tsukada and stands in condition for allowance. As all other claims depend directly or indirectly from allowable independent claim 1, Applicants further submit that all dependent claims are also allowable for at least this reason.

Applicant therefore respectfully requests that the rejection of claims 1-7 under 35 U.S.C. §102 be withdrawn.

SUMMARY OF NEW CLAIMS

New claims 8 - 11 do not add new matter and depend from allowable independent claim 1. Therefore, the new claims too should be allowed.

CONCLUSION

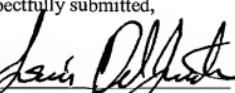
In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number indicated below once he has reviewed the proposed amendment if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

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Respectfully submitted,

for

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